

REMARKS

In response to the Office Action dated November 20, 2007, Applicants have amended the claims, which when considered with the following remarks, is deemed to place the present application in condition for allowance. Favorable consideration and allowance of all pending claims is respectfully requested. The amendments to the claims have been made in the interest of expediting prosecution of this case. Applicants reserve the right to prosecute the same or similar subject matter in this or another application.

Claims 1-5, 9, 11, 12, 30 and 31 are pending in this application. By this Amendment, Claims 1-5, 9, 11, 12, 30 and 31 have been amended to recite that the low phosphorous or phosphorous-free lubricating oil composition is a low phosphorous or phosphorous-free lubricating internal combustion engine oil composition and new Claim 32 has been added. Support for amended Claims 1-5, 9, 11, 12, 30 and 31 can be found throughout the specification, e.g., the title, page 6, line 9 through page 7, line 2, page 7, lines 10-21, page 8, lines 2-10 and page 46, lines 2-12. Support for new Claim 32 can be found on page 30, lines 16 and 17. Applicants respectfully submit that no new matter has been added to this application nor have any new issues been raised by these amendments. Moreover, it is believed that the amendment to the claims as presented herein places the application in condition for allowance.

In the last Office Action mailed November 20, 2007, the Examiner finally rejected Claims 1-5, 9, 11, 12, 30 and 31 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. The Examiner alleges that the claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventor had possession of the invention as claimed.

Firstly, it is the Examiner's belief that Claim 1 contains new matter with respect to the recitation "wherein a tackifier is not present in the composition". While not necessarily agreeing with the Examiner, Claim 1 has been amended to delete the recitation "wherein a tackifier is not present in the composition". Accordingly, the claimed low phosphorous or phosphorous-free lubricating internal combustion engine oil composition is believed to be fully supported by the specification as to comply with the requirements of the first paragraph of 35 U.S.C. §112. Thus, withdrawal of the rejection under the first paragraph of 35 U.S.C. §112 is respectfully requested.

Secondly, it is the Examiner's belief that Claim 31 contains new matter with respect to the recitation "wherein a tackifier and a hindered phenol antioxidant are not present in the composition". While not necessarily agreeing with the Examiner, Claim 31 has been amended to recite "wherein a hindered phenol antioxidant is not present in the composition". Accordingly, withdrawal of the rejection based on a tackifier not being present in the composition is respectfully requested.

The rejection of Claim 31, based on the recitation "wherein ... a hindered phenol antioxidant is not present in the composition", is respectfully traversed. According to the Examiner, while "applicant's specification does mention "hindered phenols", they are disclosed in the context of being examples of useful other oxidation-corrosion inhibitors **FOR applicant's claimed composition!**, see page 27, lines 18-21 of the specification." [Original Emphasis].

However, it is well established that "[t]he test for sufficiency of support ... is whether the disclosure of the application relied upon 'reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter.'" *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563, 19 USPQ 2d 1111, 1116 (Fed. Cir. 1999) quoting *Ralston Purina Co. v. Far-*

Mar-Co. Inc., 772 F.2d 1570, 1575, 227 USPQ 177, 179 (Fed. Cir. 1985). Exactly how the specification allows one skilled in the art to recognize that an applicant had possession of the claimed invention is not material. *In re Smith*, 481 F.2d 910, 178 USPQ 279 (CCPA 1973). Accordingly, to comply with the description requirement, it is not necessary that the application describe the invention *ipsis verbis*. *In re Lukach*, 442 F.2d 967, 169 USPQ 795 (CCPA 1971).

The specification clearly sets forth that the low phosphorous or phosphorous-free lubricating internal combustion engine oil composition does not have to contain a hindered phenol antioxidant. This is readily shown in the working examples where the low phosphorous or phosphorous-free lubricating internal combustion engine oil compositions of Examples 1 and 2 contain a dialkylated diphenylamine ashless antioxidant and *not* a hindered phenol antioxidant. Accordingly, the claimed low phosphorous or phosphorous-free lubricating internal combustion engine oil composition can be found within the specification as filed to allow one skilled in the art to believe that applicants were in possession of the claimed subject matter as of the filing date. Such being the case, the claimed low phosphorous or phosphorous-free lubricating internal combustion engine oil composition as presently recited in Claim 31 is believed to be fully supported by the specification as to comply with the requirement for the first paragraph of 35 U.S.C. §112. Thus, withdrawal of the rejection under the first paragraph of 35 U.S.C. §112 is respectfully requested.

In the last Office Action mailed November 20, 2007, the Examiner has rejected Claims 1-5, 9, 11, 12, 30 and 31 under 35 U.S.C. §102(b) as being anticipated by, or, in the alternative, under 35 U.S.C. §103(a) as obvious over Field et al. International Application No. WO 99/18175 ("Field et al.").

Nowhere does Field et al. disclose a low phosphorous or phosphorous-free lubricating internal combustion engine oil composition *consisting essentially of*“(a) a major amount of base oil of lubricating viscosity; (b) a minor deposit-inhibiting effective amount of at least one polyol ester ... (c) a diphenyl amine antioxidant; and (d) at least one additive selected from the group consisting of a metal detergent, rust inhibitor, dehazer, demulsifier, metal deactivator, friction modifier, viscosity index improver, extreme pressure agent, pour point depressant, antifoaming agent, co-solvent, package compatibiliser, metallic combustion improver, anti-knock compound, anti-icing additive, ashless dispersant and dye ...” as presently recited in amended Claim 1. By employing the transitional phrase “consisting essentially of” in a composition claim, the scope of the claim is limited to the specific ingredients recited in the claim and those that do not materially affect the basic and novel characteristic(s) of the composition. *Atlas Powder Co. v. I.E. Du Pont De Nemours & Co.*, 750 F.2d 1569, 1573-74, 224 USPQ 409, 411 (Fed. Cir. 1984).

In the Office Action, the Examiner states:

In regards to the above prior-art rejections made over Field et al. it is clear from applicant's remarks that applicant has misread the scope of the Field et al.'s invention when applicant insists that Field et al's invention requires: "three essentially components: (1) a lubricating oil, (2) a polyol ester and (3) a hindered phenol as an antioxidant" see page 8 of the REMARKS. A quick look at Field et al's independent claim 1 clearly shows that a hindered phenol is NOT a required component! Hindered phenols are only optional components according to Field et al's invention. In fact antioxidants themselves are only an optional component of Field et al's invention. All because Field et al's Abstract of the invention mentions an antioxidant as a component of the composition, does not mean that all disclosed composition must have a hindered phenol. The composition given in Field et al's Abstract was given by way of illustration and not by way of limitation of compositions taught by Field et al. In any case, hindered phenols directly fall within the scope of corrosion inhibitors claimed in independent claims 1 and 31. Finally, Field et al. also directly discloses that applicant's newly required diphenylamine antioxidant component, is an effective suitable antioxidant for Field et al's compositions, see page 12, lines 19-23.

In contrast to the Examiner's position, Claim 1 of Field et al. does not disclose the claimed low phosphorous or phosphorous-free lubricating internal combustion engine oil composition. Rather, Claim 1 of Field et al. merely recites the use, to improve the ability of a lubricant composition, to retain particulate combustion products in suspension, of an ester of a carboxylic acid having at most 30 carbon atoms and an alcohol, the ester having a molecular weight within the range of from 400 to 5000. Certainly, this is *not* a disclosure of each and every element of the low phosphorous or phosphorous-free lubricating internal combustion engine oil composition consisting essentially of components (a)-(d) as recited in amended Claim 1.

In addition, Field et al. disclose the following different lubricant compositions: (1) a lubricant composition containing a natural or synthetic base stock and various additives (see page 5 of Field et al.), (2) a lubricant composition containing an ester of a carboxylic acid having at most 30 carbon atoms and an alcohol, the ester having a molecular weight within the range of from 400 to 5000 and an amine-based friction modifier (see page 5 and Claim 14 of Field et al.), and (3) a lubricant composition containing an ester of a carboxylic acid having at most 30 carbon atoms and an alcohol, the ester having a molecular weight within the range of from 400 to 5000, an alkylene arene/diene copolymer viscosity modifier and a hindered phenol antioxidant (see page 6 and Claim 22 of Field et al.). Field et al. further disclose that if another antioxidant is present in the lubricant composition, it is in addition to the one provided in accordance with the invention, i.e., the hindered phenol antioxidant (see page 12 of Field et al.). In point of fact, Example 1 in Field et al. employs (1) a base stock, (2) a trimethylolpropane ester of mixed C₈ to C₁₀ alkanolic acids, (3) a viscosity modifier, (4) a hindered phenolic antioxidant, (5) an amine friction modifier and (6) the balance being a dispersant, ashless and metal detergent, antiwear agent, flow improver, corrosion inhibitor, *other antioxidant*, antifoam and diluents. Accordingly,

Field et al clearly requires a hindered phenol antioxidant when an antioxidant is included in the lubricant composition disclosed therein. Accordingly, Field et al. cannot possibly anticipate the lubricating oil composition set forth in amended Claim 1.

There is likewise no suggestion or motivation in Field et al. of a low phosphorous or phosphorous-free lubricating internal combustion engine oil composition consisting essentially of “(a) a major amount of base oil of lubricating viscosity; (b) a minor deposit-inhibiting effective amount of at least one polyol ester ... (c) a diphenyl amine antioxidant; and (d) at least one additive selected from the group consisting of a metal detergent, rust inhibitor, dehazer, demulsifier, metal deactivator, friction modifier, viscosity index improver, extreme pressure agent, pour point depressant, antifoaming agent, co-solvent, package compatibiliser, metallic combustion improver, anti-knock compound, anti-icing additive, ashless dispersant and dye ...” as presently set forth in amended Claim 1. In contrast, as stated above, the lubricating oil composition disclosed in Field et al. must contain a *hindered phenol* as an antioxidant when an antioxidant is included in the composition. Field et al. go on to state that if another antioxidant is present in the lubricating oil it is in addition to the one provided in accordance with the invention, i.e., the hindered phenol antioxidant (see page 12 of Field et al.). Thus, it is not seen in Field et al. where there is any suggestion, motivation for or even a hint of a low phosphorous or phosphorous-free lubricating internal combustion engine oil composition *consisting essentially of* “(a) a major amount of base oil of lubricating viscosity; (b) a minor deposit-inhibiting effective amount of at least one polyol ester ... (c) a diphenyl amine antioxidant; and (d) at least one additive selected from the group consisting of a metal detergent, rust inhibitor, dehazer, demulsifier, metal deactivator, friction modifier, viscosity index improver, extreme pressure agent, pour point depressant, antifoaming agent, co-solvent, package compatibiliser,

metallic combustion improver, anti-knock compound, anti-icing additive, ashless dispersant and dye ...” as presently recited in amended Claim 1. Thus, Field et al. teach away from the presently recited low phosphorous or phosphorous-free lubricating internal combustion engine oil composition set forth in amended Claim 1. As such, amended Claim 1 is believed to be non-obvious, and therefore patentable, over Field et al.

With respect to amended Claim 31, there is no disclosure in Field et al. of a low phosphorous or phosphorous-free lubricating internal combustion engine oil composition comprising “(a) a major amount of base oil of lubricating viscosity; (b) a minor deposit-inhibiting effective amount of at least one polyol ester ... and (c) a diphenyl amine antioxidant, and wherein *a hindered phenol antioxidant is not present in the composition ...*” as presently recited in amended Claim 31. In contrast thereto and as discussed above, Field et al. must contain a hindered phenol when an antioxidant is included in the composition. Since the low phosphorous or phosphorous-free lubricating internal combustion engine oil composition of amended Claim 31 does not contain a hindered phenol antioxidant, which is an essential ingredient in the composition of Field et al. when an antioxidant is present therein, Field et al. cannot possibly anticipate the low phosphorous or phosphorous-free lubricating internal combustion engine oil composition set forth in amended Claim 31.

There is likewise no suggestion or motivation in Field et al. of a low phosphorous or phosphorous-free lubricating internal combustion engine oil composition comprising “(a) a major amount of base oil of lubricating viscosity; (b) a minor deposit-inhibiting effective amount of at least one polyol ester ... and (c) a diphenyl amine antioxidant, and wherein *a hindered phenol antioxidant is not present in the composition ...*” as presently recited in amended Claim 31.

As discussed above, the lubricating oil composition of Field et al. specifically requires a hindered phenol antioxidant when an antioxidant is included in the lubricant composition (see page 12 of Field et al.). However, the low phosphorous or phosphorous-free lubricating internal combustion engine oil composition as presently recited in amended Claim 31 does not contain a hindered phenol antioxidant therein. As such, the disclosure of Field et al. teaches away from the presently recited low phosphorous or phosphorous-free lubricating internal combustion engine oil composition set forth in amended Claim 31.

In addition to and apart from the foregoing arguments, in order to anticipate, a prior art reference must place the inventive compound or composition in the possession of the public. *In re Brown*, 329 F.2d 1006, 1011, 145 USPQ 245 (C.C.P.A. 1964). Thus, the prior art reference must disclose each and every feature of the claimed invention, either explicitly or inherently. *Glaxo Inc. v. Novopharm Ltd.*, 52 F.3d 1043, 1047, 34 USPQ2d 1565 (Fed. Cir. 1995). Nowhere in Field et al. is there any disclosure or suggestion of a lubricating oil composition having a phosphorous content not exceeding 0.08% by weight and a sulfur content not exceeding 0.2% by weight, based on the total weight of the composition, as presently recited in amended Claims 1 and 31. In contrast thereto, Field et al. simply disclose that if a material free from phosphorous is required, there may be used a dithiocarbamate, i.e., a sulfur-containing compound. Besides, at the time of filing the Field et al. application, i.e., October 3, 1997, governing regulatory agencies did not have the low phosphorous and low sulfur requirements that exist in the industry today. Thus, even by employing a lubricating oil composition inherently free of sulfur, phosphorus and metals, Field et al. would not have possibly contemplated claiming a lubricating oil composition having any limits to the phosphorous and sulfur content therein and would have used additives containing relatively high amounts of phosphorous and sulfur. As such, the lubricating oil

compositions of Field et al. would not possibly place the recited low phosphorous or phosphorous-free lubricating internal combustion engine oil composition of amended Claims 1 and 31 in the possession of the public.

In the Office Action, the Examiner states that “Please note that it is notoriously well known in the art that synthetic lubricants, minus optional additives, are made free of phosphorous and sulfur. As such, the synthetic lubricant used in the examples of the reference does not contain any phosphorous or sulfur.” This wholly unsupported position cannot possibly serve as a basis for this rejection. If it is the Examiner’s position that Field et al. disclose a low phosphorous or phosphorous-free lubricating internal combustion engine oil composition having the phosphorous and sulfur content recited therein, the Examiner is respectfully requested to identify with particularity (i.e., page number) where such disclosure can be found or provide a reference that supports the Examiner’s position.

With respect to Claims 30 and 32, nowhere in Field et al. is there any disclosure or suggestion of a low phosphorous or phosphorous-free lubricating internal combustion engine oil composition containing, *inter alia*, a dialkylated diphenylamine antioxidant. Rather, Field et al. simply disclose that a diphenylamine antioxidant can be used. Certainly, this is not a disclosure of a dialkylated diphenylamine antioxidant. Accordingly, Claims 30 and 32 are further believed to be patentable over Field et al.

For the forgoing reasons, amended Claims 1-5, 9, 11, 12, 30 and 31 and new Claim 32 are believed to be patentable over Field et al. and allowance of these claims is respectfully requested.

In the last Office Action mailed November 20, 2007, the Examiner states:

The previously made prior-art rejections made over Culpron, Jr. U.S. Patent Number 5,151,205, have been dropped in light of applicant's New Matter limitation of: "wherein a tackifier is not present in the composition". If applicant were to remove said New Matter limitation from independent claims 1 and 30, the previously made prior art rejections over Culpron, Jr. would need to be reinstated. In any case, applicant's arguments in the REMARKS section of the amendment that: "Thus, the lubricating oil composition as presently set forth in amended claim 1 would not even contemplate a tackifier therein." (see page 7, lines 18-19) is not accepted by the examiner. The reasons for this is because Culpron's required tackifier component clearly reads on applicant's claimed additives, such as friction modifiers, and viscosity index improver. On page 18, line 18 to page 19, line 4 of applicant's specification, applicant clearly teaches polymers and copolymers as viscosity index improves. Culpron's polybutene tackifier species clearly falls within applicant's generic disclosure viscosity index improvers. Furthermore, many other of applicant's claimed functional additives would also seem to read on Culpron's tackifier component since such a tackifier could function as a corrosion-inhibitor, an anti-icing agent, a pour point depressant etc., even if such functions are not directly taught by the reference.

Applicants respectfully submit that Claims 1 and 31 as presently amended clearly distinguish over Culpron. In contrast to the presently claimed invention, Culpron fails to disclose or suggest a low phosphorous or phosphorous-free lubricating *internal combustion engine oil* composition as presently recited in amended Claims 1 and 31

Rather, Culpron discloses a *chain and drive gear lubricant* comprising (a) major portion of a synthetic base lubricating oil, (b) a solubilizer comprising a trimethylol propane ester of C₆ to C₁₂ carboxylic acids; and (c) 2 to 4 wt % of a tackifier comprising a polybutene polymer of molecular weight 100,000 to 1,000,000 and (d) additives such as sulfur and phosphorous-containing antiwear and extreme pressure gear oil additives. The primary goal of Culpron is to replace a mineral oil formulation with a synthetic oil formulation for chain and drive gear assemblies associated with ovens, furnaces, kilns and other hot equipment used in textile plants, heavy manufacturing, light manufacturing, wall board manufacturing, corrugated metal plants,

paper mills and other manufacturing facilities. Unquestionably, a chain and drive gear lubricant is not a low phosphorous or phosphorous-free lubricating internal combustion engine oil composition. The presently recited low phosphorous or phosphorous-free lubricating internal combustion engine oil compositions, as set forth in the present claims, are more environmentally desirable than the higher phosphorous and sulfur content lubricating internal combustion engine oil compositions generally used in the crankcase of the *internal combustion engine* because they facilitate longer catalytic converter life and activity while also employing relatively low levels of the specifically recited polyol ester to provide high wear and deposit protection and oxidation-corrosion inhibition. Nothing in Culpon would lead one skilled in the art to modify the chain and drive gear lubricants disclosed therein and arrive at the presently claimed low phosphorous or phosphorous-free lubricating internal combustion engine oil composition with any expectation of success. As such, amended Claims 1 and 31 are believed to be patentable over Culpon.

In the last Office Action, the Examiner provisionally rejected Claims 1-5, 9, 11, 12, 30 and 31 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims 1-46 of copending Application No. 11/046,994. Upon resolution of all outstanding issues remaining in the Office Action, Applicants will consider the timely submission of a Terminal Disclaimer.

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Response to Office Action dated November 20, 2007

For the foregoing reasons, amended Claims 1-5, 9, 11, 12, 30 and 31 and new Claim 32 as presented herein are believed to be in condition for allowance. Such early and favorable action is earnestly solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Michael E. Carmen", written in a cursive style.

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